Amendments to the Specification

Kindly amend the specification as follows.

On page 1, replace the first full paragraph under the heading "CROSS REFERENCE TO RELATED APPLICATIONS" with the following:

> This application claims priority to the expired U.S. Provisional Application Serial No. 60/431,154 entitled "ENHANCED VERSION OF CONNEX MEMORY", ~~and~~ filed on December 5, 2002, hereby incorporated by reference in its entirety. The subject matter of this application relates to ~~pending~~ U.S. Patent ~~Application Serial No. 09/928,151~~ No. 6,760,821 entitled "A MEMORY ENGINE FOR THE INSPECTION AND MANIPULATION OF DATA", ~~filed on August 10, 2001~~ issued on July 6, 2004, and U.S. ~~Application Serial No. _____ entitled~~ Patent No. 7,107,478 entitled "DATA PROCESSING SYSTEM FOR A CARTESIAN CONTROLLER", ~~filed December _____, 2003~~ issued on September 12, 2006, both of which are herein incorporated by reference in their entirety.

On pages 3-4, replace paragraph [0010] with the following:

> A key field of fixed size, is attached to all data stored in most associative memory devices. A search key may then be utilized to select a specific data field, or plurality of data fields whose attached key ~~field(s)~~ field(s) match the search key, from within the associative memory device, irrespective of their named location, for subsequent processing in accordance with directed instructions.

On page 10-11, please replace paragraph [0044] with the following:

> Figure 4 illustrates one embodiment of an internal structure of the *m*-bit cells within the CM **104**. As shown in Figure 4, the internal structure of each cell includes the following circuits:
>
> - **ALU**: arithmetic and logic unit **130** that performs addition, subtraction, comparisons, and bitwise logic functions

- ~~**leftMux**~~**rightMux**: multiplexer ~~**131**~~ **132** which selects the ~~left~~ right operand for **ALU** from:
    - **w**: the value stored in the accumulator register **134**
    - **in**: the value received from the input register **112**
    - **memOut**: the value read from the vector memory addressed by the vector address register, **VAR 118**
- **leftMux**: multiplexer **131** which selects the left operand for **ALU** from:
    - **w**: the value stored in the accumulator register **134**
    - **in**: the value received from the input register **112**
- **aluMux**: multiplexer **133**,which selects the value to be loaded into the accumulator register (**w 134**) from:
    - **w**: the value stored in the accumulator register 134
    - **fromLeft**: the value stored in the accumulator register of the left cell
    - **fromRight**: the value stored in the accumulator register of the right cell
    - the output of **ALU 130**
- **w**: the accumulator register **134**
- **mark**: the marker register
- tristate output buffers
- **DECODE**: a combinational circuit **137** which decodes the instructions according to the local context generated by:
    - **localFlags**: generated by **ALU**
    - **leftFlags**: the flags received from the left cell
    - **rightFlags**: the flags received from the right cell
    - **class_i**: classification code received from the **TRANSCODER** generating:
        - command codes for **leftMux, rightMux, ALU, aluMux, mark, tristate buffers**
        - flags from neighboring cells
        - **state_i** bit of the cell for the **TRANSCODER**